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ABSTRACT

The task group report presented in this publication is one of a series prepared by eminent psychologists who have served as consultants in the U.S. Office of Education-sponsored grant study to conduct a Critical Appraisal of the Personality-Emotions-Motivation Domain. In order to achieve the goal of identifying important problems and areas for new research and methodological issues related to them, an approach was followed in which leading investigators in specialized areas were enlisted as members of task groups and asked to reflect on their current knowledge of ongoing research and to identify the research needs in their respective areas. The articles in this publication are: (1) Child Socialization; An Overview (Gorsuch); (2) A Social Learning Perspective (Parke); (3) Research Directions in the Study of Moral Development and Moral Education (Turiel and Kohlberg); (4) Socialization of Moral Values and Behavior (Mussen); and (5) A New Theoretical Perspective for Research on Human Development (Bronfenbrenner). (Author)

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NEEDED RESEARCH ON CHILD SOCIALIZATION
A SPECIAL REPORT OF THE USOE-SPONSORED GRANT STUDY: CRITICAL APPRAISAL OF RESEARCH IN THE PERSONALITY-EMOTIONS-MOTIVATION DOMAIN

Prepared by Task Group I200 - Child Socialization
Richard L. Gorsuch, Chairman, Rose D. Parke,
Elliot Turiel, Lawrence Kohlberg, Paul Mussen,
and Urie Bronfenbrenner

Under the Editorship of S. B. Sells and R. C. Tupes
Co-Investigators, Grant No. OEC 0-70-2665-(508)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

The task group report presented in the following pages is one of a series prepared by eminent psychologists who have served as consultants in the U. S. Office of Education sponsored grant study to conduct a Critical Appraisal of the Personality-Emotions-Motivation Domain. The study was planned with the advice of an advisory committee including Professors Raymond B. Cattell and J. McV. Hunt (University of Illinois), Donald W. MacKinnon (University of California, Berkeley), Warren T. Norman (University of Michigan), and Dr. Robert H. Beezer (USOE) and follows a topical outline included as an appendix to the present report. In order to achieve the goal of identifying important problems and areas for new research and methodological issues related to them, an approach was followed in which leading investigators in specialized areas were enlisted as members of task groups and asked to reflect on their current knowledge of ongoing research and to identify the research needs in their respective areas. The general plan is to publish these reports as a collection with integration contributed by the editors. It is hoped that these reports will prove to be valuable to research scientists and administrators.

S. B. Sells, Ph.D.
Robert G. Demaree, Ph.D.
Responsible Investigators

CONTENTS

I.	Child Socialization: An Overview	Richard L. Gorsuch
II.	A Social Learning Perspective	Ross D. Parke
III.	Research Directions in the Study of Moral Development and Moral Education	Elliot Turiel and Lawrence Kohlberg
IV.	Socialization of Moral Values and Behavior	Paul Mussen
V.	A New Theoretical Perspective for Research on Human Development	Urie Bronfenbrenner

Appendix: Outline for PEM Study Adopted for Planning Purposes

I. Child Socialization: An Overview

Richard L. Gorsuch

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on Education and Human Development
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Socialization is concerned with how a child develops the norms of his society. Depending upon how this definition is interpreted, the area can be seen as broad or narrow. In its broad form, it becomes almost the equivalent of child development in general since mankind is a social creature. From a narrower perspective, the area is concerned with norms in a strict sense, i.e., the internalization of the basic values that a society seeks to transmit to its new members. The present appraisal has considered socialization from the narrower perspective so that it would be manageable within the limits of our section of the report. Adopting the more limited perspective is not unduly restrictive since the processes are probably similar to those in, for example, the socialization of sex and occupational roles.

In being concerned with the development of internalized norms, the area of socialization is confronted with a basic philosophical problem of child development and education: how is the process of the child adapting to society integrated with but distinct from the way in which a child develops the skills and norms for remaking society? Research can help sharpen the question. For example, Mead (1963) has distinguished between socialization and enculturation with the former being the process by which a child becomes sufficiently humanized to be able to adapt to some society and enculturation being the process by which the child comes to decide

what society he wants to adapt to. Kohlberg's (1969) cognitive stage approach to socialization provides one possible operationalization of the distinction since the stages of moral reasoning develop relatively independently of a child's moral content; the stages are then equivalent to socialization and the content to enculturation. The content-oriented work of Gorsuch (1971) and Scott (1965) has also suggested that the socialization process may be more typical of the elementary school years whereas enculturation may be more typical of the post-elementary school years (Gorsuch & Smith, in preparation). This research, which might allow operationalization of Mead's distinction, typifies how a basic study of socialization may enlighten questions faced in our society. But the example also points to the limited nature of our research in the area, for the socialization-enculturation distinction is not sufficiently developed to identify which events in a child's life fall into which category.

This is not to say that no important research has been conducted on socialization, for that would be a false statement. Goslin's Handbook (1969) provides weighty evidence -- in both senses -- to the contrary. But in any research area, there is a period of preliminary study that serves to sharpen the outlines of the directions in which research should proceed. With further study, the data begin to reveal their secrets and a new, more effective paradigm can be established. The papers contributed for this report suggest that the area of socialization has reached a "sharpened outline" point.

Research on socialization has been concerned with two different phases of the problem. On the one hand, investigators such as Piaget (1965), Bandura (1969), and Aronfreed (1968) have been concerned with the process by which norms are internalized. The research has often used laboratory approaches or has examined the thought processes of children at different ages. In this report, Parke examines the state of social learning theory's contributions to process oriented theories of socialization while Turiel and Kohlberg perform the same service for the cognitive stage approach to socialization.

On the other hand, research has also been concerned with the agents of socialization. Typical studies have examined the effects of early childhood rearing practices (e.g., Sears, et al, 1957; Hoffman & Salzstein, 1967). Mussen uses this orientation in discussing the state of our research needs in moral values and behavior while Bronfenbrenner broadens the discussion to include other areas of socialization as well.

While the papers can be roughly grouped as more concerned with either the process of socialization or with socializing agents, every contributor argues that the productivity of such a division is limited. Instead, the child is viewed as enmeshed in a set of interacting systems. Each system may have processes similar to those used by the other socialization systems as well as processes which are only effective with that particular system. While the need to consider the ecological setting of the child was stressed forty years ago by Hartshorne and May (1928, 1929, 1930) when they

pointed to the importance of the child's classroom, it has been neglected, if not ignored ever since. A major point of the present papers is that the ecological setting can be ignored no longer.

An example of the need for a systems approach is the proliferating research on television. While some of it is laboratory research and some naturalistic, it is usually characterized by a failure to consider television as a socializing agent which interacts with other socializing systems to produce the total effect. From a systems approach, one would expect it to have a different effect when, for example, the parents systematically trained children away from aggression as compared to when the parents were intimidated by the child's aggression. If the child imitates the aggressive TV models in the former case, the parental reactions would lead to the child receiving valuable lessons increasing the child's resistance to aggressive models. In the latter case, the child would become more aggressive than if no TV were available. How often do either of these two cases occur? We won't know until TV's impact on socialization is investigated as one part of a set of ongoing, interacting systems within which the child is socialized.

An often overlooked aspect of the set of systems influencing socialization is the child himself. Each child brings to a given situation a reinforcement history and level of development which may cause him to respond differently than another child. This is particularly true with sex differences since the norms in our society are partially a function of differential roles for boys and girls. While most studies have performed separate analyses for boys and girls, few attempts have been made to integrate non-age differences among children into socialization theory.

Another aspect of socialization that has been generally overlooked is the learning of socialization practices. How do parents, teachers, and other adults learn norms for their behaviors toward children? Certainly, imitation of people whom they have seen in the role and learning from the children with whom they work are two probable sources, but the various agents will also influence each other. But some adults would not seem to exist if our current research on socialization was used to define existence. For example, most child psychologists appear to assume that teachers are solely within the purview of school psychologists and need not be considered in the basic processes of socialization. And this is in spite of the fact that teachers often spend more time interacting with a child than any other single adult, and may significantly affect the parent-child interaction.

To examine socialization as a transactional process involving several interacting systems may require some alterations in the style of research. The total area is too complex to assume that one investigator can know each of the systems thoroughly. Instead, we may need to move to a model where a laboratory of cooperative scientists is involved in any given project. In like manner, the area may need to use more of the available multivariate statistics to trace complex interactions.

The analysis of an ongoing set of systems also requires data collected from several points in time. While this creates strategic problems again requiring a team approach, it also suggests that following children across time will be necessary to persuade some

of the more important developmental processes to give up their secrets. But a pure longitudinal study has serious difficulties. First, the changes noted could be explained either as a function of new socialization processes, as a result of a general shift affecting all members of the culture, or as a function of the continual testing and observation. Second, to follow the children for ten to twenty years and then to publish one's results means that the child rearing conditions may have changed sufficiently so that the same situations could be no longer found.

The problems inherent in a longitudinal design are reduced in a cross-sectional, longitudinal design. Children at several age levels are studied and each group of children followed until they are the same age as were the next older group of children when the study began. This design has the advantages of the traditional longitudinal study without its disadvantages, and is the preferred approach for the necessary systems analysis of socialization.

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II. A Social Learning Perspective

Ross D. Parke

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Social learning theory (c.f. Bandura and Walters, 1963) has been highly productive of hypotheses concerning the socialization process, and the empirical studies that have emerged from the tradition are important contributions to an analysis of the processes that may underlie socialization. In this brief overview of the current status of social learning theory's contribution to childhood socialization, the three main processes postulated by social learning--social reinforcement, punishment, and imitation will be examined. It will be suggested that a number of changes in research strategy and in basic assumptions concerning social development are necessary in order to fully exploit the potential contribution of social learning theory to the problem of socialization. Three main changes in social learning research are required. First, social learning research must become more developmentally-oriented. Second, the ecological validity of the findings must be given greater consideration. Third, the almost exclusive reliance on the experimental method must give way to alternative methodological approaches.

The need for a more developmental orientation

Due to the assumption that social learning processes operated in a qualitatively similar manner at various age points, little developmentally-oriented research has emerged from this tradition. Typically, only one age is employed, and it is assumed that similar effects hold at other age levels as well. For purposes of building a technology of behavior modification, it is probably possible to

ignore age effects. If the aim is to illuminate the socialization process, however, social learning theory must give full recognition to the developmental status of the organism and demonstrate the changing role of social learning processes at different age levels. Recent research, such as Hartup and Coates' (1969) demonstration that verbalization had different effects on the observational learning of children of various ages, has clearly challenged the assumption of age independence of social learning theory principles. It is not surprising, therefore, that there has been little attempt to build a developmental theory of imitation, although Piaget's suggestions will probably be useful, as will recent advances in our understanding of language development. Such a theory, of course, requires that the child's changing cognitive and linguistic capacities be taken into account. An issue that a comprehensive developmental theory of imitation must face is the origin of imitative behavior in infancy. Is it prewired and/or dependent on certain kinds of social learning conditions for its emergence? If so, what are these conditions? An examination of this issue may lead us to reconsider the function that imitation serves at various developmental levels. Social learning theory has concentrated on the role that imitation plays in the acquisition and modification of social behavior. However, imitation may play a very different function in infancy than in later childhood and adulthood. In infancy, imitation may be a form of social interchange between infant and caretaker, and research aimed at determining the role that imitation plays in maintaining contact between parent and infant is clearly required. It is clear that many new questions emerge when imitation

is viewed as a mutually reciprocal process; the kind of function that social learning theorists have assigned to imitation in the socialization process needs to be expanded.

In the area of social reinforcement (cf. Stevenson, 1965) a number of experiments have indicated the importance of the child's developmental status in determining the effectiveness of social reinforcement. Similarly, different types of reinforcement (approval vs. information concerning correctness) have been found to be differentially effective with the child's age. However, the age range that has been employed has typically been rather small, and not much attention has been paid to the specific origins of social reinforcer effectiveness. It is likely that recent studies of the development of social attachment (Shaffer and Emerson, 1964; Maccoby and Masters, 1970) in combination with developmental studies of infant learning (Papousek, 1967; Lewis, 1969) could yield valuable insights concerning the child's capacity to learn through social reinforcement at different ages. Specifically, developmentally-oriented research aimed at determining the types of socializing agents that are effective at different ages is necessary; the form of social reinforcement also (tactual, auditory, visual, etc.) requires more attention. Do infants, for example, respond more to social stimulation in one sensory modality than another? Do these patterns change with age; and if so, what are the determinants of these shifts?

In the area of punishment, social learning theorists have uncovered a wide variety of parameters that alter the impact of punishment; in addition, sophisticated analyses of the mechanisms that may

underlie different disciplinary techniques have been offered (e.g., Aronfreed, 1969; Walters and Parke, 1967). What is clearly lacking is developmentally-oriented data. However, it is extremely unlikely that all punishment parameters will have similar effects at all developmental levels. This is particularly true in light of recent trends in this area which have stressed the role of cognitive factors as significant modifiers of punishment. The work of Luria can provide a useful theoretical guide in this area. In addition to systematic analyses of the effectiveness of different types of punishment and different disciplinary techniques at different ages, closer attention to the origins of punishment effectiveness are necessary. An examination of theories of fear development in infancy would probably be useful in understanding the effectiveness of different types of discipline and punishment.

In addition to the need for a detailed analysis of the variables that alter the effectiveness of different social learning processes at various age points, an understanding of the comparative effectiveness of different training techniques as a function of age and type of behavior is necessary. Once an analysis has been done of the cognitive and linguistic requirements that are necessary to benefit from a particular type of technique, a classification of behavior change techniques that are most suitable to the child's developmental status will be possible. Imitation, for example, may play a less important role than direct reinforcement in infancy, since a more highly developed representational capacity is required for imitative learning.

One final point: to argue for a developmental orientation does not invalidate a social learning analysis, nor is it inconsistent with a commitment to social learning principles. Rather, it merely reflects an acknowledgment of the fact that social principles may operate differently at different points in the child's development. Social learning theory has given a central place to cognitive processes as evidenced by Bandura's S-S theory of imitation; in advocating a developmental orientation, the child's changing cognitive and linguistic capacities are given their proper recognition.

The Ecological Validity of a Social Learning Analysis of Socialization

The main thrust of recent research conducted within a social learning theory framework has been the investigation of the variables affecting the operation of social learning principles. What has been lacking is a demonstration of the ecological validity of these principles. Social learning theorists have failed to demonstrate empirically how their principles apply to naturalistic socialization. In fact, social learning theorists have been guilty of building "a mythology of childhood"--to borrow Baldwin's (1967) phrase--in which a set of effects demonstrated in the laboratory is assumed to actually take place in naturalistic socialization contexts and be an accurate account of how the child is socialized. As a result, there has been a confusion between necessary and sufficient causality; the laboratory experiments tell us only that imitation, social reinforcement, and punishment are possible contributors to childhood learning of societal norms. However, the extent to which these hypothesized processes are, in fact, necessary techniques

for adequate socialization is clearly left unanswered. Two sets of issues are involved here. First, is it possible to demonstrate the operation of these principles in naturalistic settings? Success at this level will make a much more persuasive argument for the relevance of social learning principles to naturalistic socialization. This type of research is particularly important in light of the criticisms that social learning theory principles have been derived from contrived and artificial laboratory settings. The second issue is a more difficult one, namely to determine the extent to which these principles are actually necessary for an adequate explanation of naturalistic socialization. This involves two aspects: (a) to what degree social learning processes, such as social reinforcement, imitation, and punishment actually occur in real-life contexts, and (b) to what extent these processes produce the powerful changes in behavior that social learning theorists assume.

Let me take each issue in turn. A number of recent manipulative studies have demonstrated that adult and peer social reinforcement can modify the social behavior of children in naturalistic contexts such as nursery schools, elementary school classrooms, and home situations (e.g., Harris, Wolf and Baer, 1967; Wahler, 1967). Similar types of studies are required to determine the effects of different types of punishment on children's behavior in naturalistic contexts. Up to the present time, the majority of research has been of two types: gross interview studies of disciplinary techniques which do not permit the specification of the impact of the operation of different social learning principles on children's social behavior or more closely controlled laboratory studies which are of

questionable ecological validity. Although studies of punishment involving the impact of loud noises on children's behavior have been useful for parametric examination of the effects of punishment, it is questionable whether these kinds of results can be easily generalized to real-life contexts. Clearly, better experimental analogues of the parental disciplinary process are necessary as well as more studies of the impact of punishment in naturalistic contexts. Similarly, few studies have examined the effect of exposure to models on children's social behavior in naturalistic settings. Typically, the situation and the dependent indices are of rather questionable ecological validity. There have been some exceptions; for example, O'Conner (1969) exposed children to a film involving peer-peer interaction and then evaluated the effect on the child viewer's subsequent social participation in a nursery school play setting. However, in this case and in the vast majority of studies of imitation, the stimulus materials were either especially constructed for experimental purposes or were heavily edited versions of commercial TV or film materials. An extensive series of studies is urgently required in which children of various ages are exposed to commercially available films or TV and then observed in naturalistic settings. This type of investigation permits more meaningful conjectures concerning the possible role that film and TV mediated models and, more generally, imitation plays in naturalistic socialization.

Let us turn to the second part of this issue, namely the need to document the extent to which social learning processes actually occur in naturalistic socialization contexts, and secondly, the

degree to which these processes have the impact that they are assumed to have in modifying social behavior in naturalistic situations.

If we are to achieve an understanding of the role played by social learning principles in childhood socialization, we first need a detailed descriptive picture of the extent to which parents use different types of direct reinforcement techniques. What kinds of "reinforcers" and "punishers" are used? How often is punishment, for example, used relative to other techniques available to the parent for controlling the child's behavior? From this type of analysis will emerge information concerning the types of events that function as positive and negative reinforcers for children of different ages. Investigations of this kind are particularly necessary in light of recent studies, such as Harris, Wolf and Baer (1967), on the role of adult attention in maintaining children's social behavior. Many of the events, such as social disapproval, which have been found to be such potent inhibitors in laboratory studies, appear to function quite differently in natural settings--and in some cases in a paradoxically opposite manner--by increasing rather than decreasing the probability of occurrence of the behavior.

A parallel problem exists in the imitation area. Little work has been carried out so far which would enable an identification of an imitative response in naturalistic settings. In other words, rules are required that would reliably permit an assessment of when observed similarity between two individuals is, in fact, due to imitation. Previous writers (e.g., Gilmore, 1966) have discussed

this issue, but little systematic effort to apply their suggestions to a study of naturalistic imitation has been made. In addition to documenting the frequency of imitative behavior on the part of children, we need to determine the extent to which imitation is a form of incidental learning and to what extent imitation is used by parents as an explicit socializing technique. In other words, to what extent do parents explicitly direct their children to imitate particular behavior? For what types of behavior is this approach used? Does imitation of the nondirect type vs. the direct type vary with the age of the child? How much direct reinforcement or punishment do parents dispense for different types of imitative behavior? Answers to these questions would, of course, not only provide useful information concerning the actual role that imitation plays in socialization, but it would also aid in the resolution of certain theoretical controversies within the imitation area.

A descriptive analysis of the frequency of occurrence of different types of socialization techniques in naturalistic contexts provides, however, only a partial answer. One of the central concerns of socialization research has been to determine the factors that govern the use of different socializing techniques. However, these studies have typically involved a classification of child-rearing tactics as a function of social class or parental characteristics. This type of study provides only gross description of parental values and preferences for certain types of child-rearing practices. There is another level of analysis that from a social-learning viewpoint is necessary for a full understanding of childhood socialization, namely an analysis of the eliciting stimulus

conditions in the immediate environment that determine a socializing agent's choice of technique. For example, what conditions determine whether punishment, rather than another disciplinary tactic will be used? Are there certain classes of behavior such as aggression that are likely to elicit punishment? Or, are high-intensity versions of an undesirable response more likely to be punished? What role does the child play in determining the choice of disciplinary technique? Another class of factors which has not received sufficient attention in discussions of the determinants of choice of socializing tactics are structural factors, such as family organization and size and the physical characteristics of different socialization settings. It is suggested that a detailed analysis of the physical features of different socialization settings is necessary in order to assess the extent to which these factors shape both the social behavior of children and the socializing activities of adults. Recent work by Sommer (1970) and by Proshansky, Ittelson and Riulin (1970) are suggestive of the kinds of dimensions that might be examined. Addressing our attention to these types of issues and questions is necessary if we are to fully understand the conditions determining the selection and utilization of different types of socializing techniques.

The second part of the ecological validity issue still remains, namely to what extent social learning processes are responsible for changes in social behavior in naturalistic settings. To answer this issue requires that we turn to methodological considerations.

What is required methodologically?

In light of these aims and problems, what methodological strategies are required? Social learning theory's contribution to an understanding of childhood socialization has been limited due to a reliance on the experimental method as the preferred methodology. It is true that alternative strategies have been employed, such as retrospective interview approaches, but these have been fraught with methodological difficulties. Moreover, they have failed to provide the kind of detailed descriptive analysis that could be treated in social-learning terms. Only gross descriptions of broad categories of behavior have been provided. Rather, a firm commitment to an observational methodology is necessary which provides a detailed molecular description of interaction patterns between the child and different socialization agents in a wide variety of naturalistic settings such as the home, schools and playgrounds. The settings that are sampled should involve the main agents in the socialization process; hence, fathers and peers as well as the mother need to be included. The observations should be sufficiently fine-grained to permit an identification and classification of the participants' behaviors in social learning terms; this is critical if the role of reinforcement and punishment as well as imitation in childhood socialization are to be properly assessed.

Second, in addition to cross-sectional studies, longitudinal investigations within a social learning framework are necessary.

It is argued that only with a longitudinal approach will it be possible to demonstrate the extent to which changes in behavior over age are due to specific social learning processes--as these are manifested in the behaviors of various socializing agents. Past longitudinal studies have yielded important information, but the molar nature of the variables and rating categories have precluded an identification of social learning processes and an assessment of their contribution.

From this type of longitudinal observational analysis will come two types of data. First, the ways in which children's social behavior shifts over age and context will be specified. This will provide a much needed normative description of the developmental course of different social behaviors. Up to now, we have only a fragmented picture of only a few behaviors. Second, the kinds of behavior exhibited by different socialization agents in response to children at different ages, exhibiting different varieties of social behavior, will be identified. Adults as well as peer agents change their behaviors across time, situation and target. Some normative data concerning the nature of these changes is necessary to a full understanding of socialization. Finally and most important, an analysis of the interaction patterns between children and their socializers will flow from this type of observational approach and permit a test of the hypothesis that the changes in children's behavior over time is, in part, due to changing reinforcement contingencies and opportunities for exposure to differing models.

A prototype of this kind of research is the monograph by Patterson, Littman and Bricker (1967) in which they were able to show that peer reactions are an important class of reinforcing events, and knowledge of these events allow prediction of the development of aggression. However, this study covers only one type of mechanism--reinforcement--and only one type of behavior, over one age period. Other observational studies are necessary to determine the role of response-contingent feedback on other behaviors, at other ages and in other settings. For example, the relative importance of peer feedback, exposure to aggressive acts displayed by other children, and externally imposed adult reinforcers as determinants of aggressive behavior in children could be assessed by observational procedures. This type of study will provide important clues concerning the role of imitation and reinforcement in children's naturalistic socialization. By tracking children longitudinally, it will be possible to determine in a more exact fashion the contribution of the child's prior social learning experiences on his subsequent behavior. Too often social learning theorists have relied upon inferred and hypothesized "histories" without any clear indication of the exact nature of the history in social-learning terms. The most important contribution of this type of detailed observational analysis is the information provided concerning the role that the hypothesized, but as yet untested, mechanisms offered by social learning do, in fact, play in accounting for changes in the child's social development.

One final note: This emphasis on observational approaches does not argue for a rejection of experimental studies of social

development. Rather, observational studies can provide valuable guides concerning the kinds of experiments and experimental analogues of socialization practices that will be more relevant to naturalistic socialization. Particularly useful in future research will be a combination of experimental and observational approaches, such as structured family interaction studies.

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III. Research Directions in the Study of Moral Development and Moral Education

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In our research on moral development, we have worked within a perspective referred to as "cognitive-developmental." The basis of this approach is: a) that the child generates his moral values and judgments out of his own experiences, b) which are processed by and dependent upon the child's cognitive stage, and c) that these values and judgments have roots in universal social experience and so are culturally universal. The view that the child's moral development involves a construction of his own values is in contrast with the internalization positions taken by a number of sociologists and psychologists. Internalization theories define moral development as the learning to conform to rules that are defined by the culture or smaller social groups. The source of the individual's morality, then, is seen to be in the rules and norms defined by external social agents.

Our research has indicated that children generate their own ways of making moral judgments through their social experiences. Following Piaget's methods, we have investigated moral development by looking at how children make judgments about moral conflicts -- i.e., the structure of their thought. From longitudinal and cross-cultural research on children's responses to a number of hypothetical moral dilemmas, such as whether to steal an expensive drug to save one's dying wife, the following six developmental stages have been derived:

Stage 1: Obedience and punishment orientation. Egocentric deference to superior power or prestige, or a trouble-avoiding set. Objective responsibility.

Stage 2: Naively egoistic orientation. Right action is that instrumentally satisfying the self's needs and occasionally others'. Awareness of relativism of value to each actor's needs and perspective. Naive egalitarianism and orientation to exchange and reciprocity.

Stage 3: Good boy orientation. Orientation to approval and to pleasing and helping others. Conformity to stereotypical images of majority or natural role behavior, and judgment by intentions.

Stage 4: Authority and social order maintaining orientation. Orientation to "doing duty" and to showing respect for authority and maintaining the given social order for its own sake. Regard for earned expectations of others.

Stage 5: Contractual legalistic orientation. Recognition of an arbitrary element or starting point in rules or expectations for the sake of agreement. Duty defined in terms of contract, general avoidance of violation of the will or rights of others, and majority will and welfare.

Stage 6: Conscience or principle orientation. Orientation not only to actually ordained social rules but to principles of choice involving appeal to logical universality and consistency. Orientation to conscience as a directing agent and to mutual respect and trust.

While the original research was with boys, recent research has found the stages to be useful with girls as well.

Our cross-culture studies (in Taiwan, Yucatan, Turkey, Great Britain, Canada and Israel) have shown that the same basic moral

concepts are used in every culture and that the stages of their development are the same in every culture. Our experimental work has demonstrated that children move through the stages one at a time and always in the same order. We have experimentally validated the proposition that children pass through the stages in the prescribed order and that change occurs in small steps at a time.

The basic notion of the stage concept is that a series of stages form an invariant developmental sequence. The sequence is invariant because each stage stems from the previous stage and prepares the way for the subsequent stage. However, children may move through the stages at varying speeds and may be found half in and half out of a particular stage. Consistent with the notion of invariance is our finding that the most effective way of stimulating change is to induce "cognitive conflict" by providing reasoning at the stage above the child's own stage.

While the stages of moral development are defined in terms of verbal moral judgment, we have hypothesized that stages are also related to behavior. Both naturalistic and experimental research has demonstrated that an individual's moral stage predicts his actual moral behavior and that judgment and action intersect in their influence upon development.

Research into aspects of stages of moral development has been more extensive in some areas than in others. We see the following problems as requiring further attention: 1) how change from stage to stage occurs, 2) how the social structure influences individual development, 3) how the structure of moral reasoning relates to its

content, 4) the relation of judgment and action, 5) a need to specify the relations of moral development to (a) cognitive development, and (b) ego development. Finally, including all the others is: 6) the application of moral development theory to moral education.

1. Stage Transition

Our current knowledge of the stages of moral development is more extensive than our knowledge of principles of movement from stage to stage. Experiments done thus far demonstrate that the child's stage and the direction of his natural development place significant limits on the type of change that can be stimulated and form the basis from which change occurs. We have found that children move through the stages in a step-wise sequential fashion, so that no stages can be skipped. We have also found that there is a resistance to backward shifts.

The conditions related to change are those of what we call "cognitive conflict" or disequilibrium. This means that stage change is a process of generating new ways of thinking stemming from previous ways that were "experienced" as inadequate. Our understanding of this "equilibration" process is still quite limited. We need to specify the organismic principles of conflict or disequilibrium regulating transition between each stage. In direct relation to such principles, we need to more clearly specify the environmental conditions or types of experiences that stimulate or inhibit the process at each stage transition.

2. How the Social Structure Influences Individual Development

Educational and naturalistic research indicates that all of the following effect moral stage development in a positive direction:

a) complexity of the total national or tribal culture

b) higher socioeconomic status and participation

c) peer group participation

d) "democratic" family environment and practices

e) participation in open, Socratic or democratic moral discussion groups

f) participation in programs in which adolescents "counsel" and empathize with the feelings of other adolescent counselors.

We have said that all these environmental effects represent enhanced role-taking opportunities, and experiences of taking the point of view of others in the course of formulating opinions and decisions. We do not, however, understand much about the quality or structure of role-taking experiences which is critical for positive effects on development. Work is required to relate the analysis of natural opportunities for role-taking to the mechanisms of transition from stage to stage. As an example, we believe that the critical feature of social structure relevant to moral development is its justice structure, its roles for allocating principles, duties, or responsibilities, awards and punishments. We believe some social structures operate on or support Stage 1 punishment and obedience concepts; others, Stage 2 instrumental exchange concepts; others, Stage 3 interpersonal loyalty concepts, etc. It remains, however, a task to define variations in family, school, and community environments in these terms in relation to the children's moral level in these environments.

3. The Relation of Content and Structure

Our research strategy has been to concentrate on the underlying structure of the individual's moral judgments. That is, we have looked at the way children reason about conflicts. In doing so, we have assumed that a given structure or stage can be associated with different (and opposing) content choices in a dilemma. However, the choices an individual makes are, of course, not unimportant. We do find, in fact, that there is some association between the stages of reasoning and choices on the dilemmas. It would be important to have a better understanding of how an individual's stage relates to the content choices of his decisions. This should include specification of the non-stage factors that influence content (e.g., information) and of the logical connections between structure and content.

4. The Relation of Judgment and Action

The problem of the relation of content to structure becomes critical in relating moral judgment structure to action. A problem requiring a major program of research is the relation of moral judgment and action. The evidence has substantiated that a relation between judgment and action does exist. As examples: studies of delinquents show that the majority, in comparison with non-delinquent controls, are at the pre-conventional stages (Stages 1 and 2) of judgment; there is a negative correlation between the amount of cheating behavior and the level of moral development; in Milgram's experiment 75% of the Stage 6 subjects refused to administer electric shocks to another person as compared to 13% of the Stage 3 and Stage 4 subjects.

Although correlational studies of this sort show that judgment and action are related, they do not serve to specify the nature of the relationship. First, we must delineate the structure of moral action in development. That is, we need ways of describing developmental trends in patterns of action. Then it is necessary to determine how an individual's reasoning relates to how he acts and how his actions relate to how he reasons. This should include consideration of how judgment and action influence development. That is, how does the child's coordination of reasoning and action influence developmental change? And does changing the stage also change the behavior in time?

5. Relation of Moral Development to: a) Cognitive Development and b) Ego Development

a): It has been found that attainment of a given Piaget logical stage is a necessary but not sufficient condition for attainment of the corresponding stages. Moral development requires intellectual development but it requires social experience as well. We do not yet understand the relations between the experiences which stimulate intellectual development and those which stimulate moral development. As an example, do decisions stimulating development of moral reasoning also stimulate the development of logical reasoning and vice versa? Furthermore, research into the relation of cognitive and moral development may help clarify the nature of development beyond Stage 4. The number of subjects found in Stages 5 and 6 have been few.

b): Research indicates that moral stages and logical stages are both related to development of the self-concept and conceptions of interpersonal relations and values. Whether moral development is at all

responsible for ego development or social concept development is unclear. To determine this requires an extension of analysis of moral stages natural to social concepts and values in areas not usually considered moral, e.g., concepts of family, work and school, of government and politics. This extension is important for understanding education and change, as well as for understanding relations of judgment to action. Many moral decisions seem to be conflicts between "selfishness" and morality. "Selfishness" or "self-interest" is, however, determined by stages of self-concept. A child may "selfishly" cheat on a test in order to achieve. The decision to achieve is, itself, the product of a more advanced self-concept than one simply concerned about tangible rewards and "fun." To understand moral choice we need to understand the self-concept, as well as the moral norms involved in an active interaction.

6. Moral Education

Work in moral education, based on moral development theory, has commenced. We have found that graduate students, thoroughly trained in moral development theory as applied to group discussions are able to conduct classroom discussions so as to stimulate the development of about half the participants to the next step of development. This effect has been achieved with black and white Junior High and High School students, with reformatory inmates, and with college undergraduates.

We still do not understand much about the process of moral discussion. Practical work depends upon the induction of conflict and uncertainty by argument among peers, and upon use of mixed groups in which students argue with other students at the next stage up.

All the theoretical work previously discussed needs to be applied to moral education practice, e.g., conflict and discussion process, justice structure of the classroom and the school, logical analysis of discussion content in terms of issues critical for transition from each stage to the next, and relations of cognitive and ego development to moral development. Finally, the relation of moral thought to action must be studied in the context of strengthening moral development change in its relation to change in moral behavior. In addition, a great deal of more applied research is needed in curricular development, teacher training, simplifying methods of measurement through more objective procedures, etc.

IV. Socialization of Moral Values and Behaviors

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Research in this area of socialization has several interrelated, but separable, goals. The foci of investigation must be on both the cognitive and behavioral (overt) aspects of morality, that is, on moral concepts, attitudes, judgments, and opinions, as well as moral actions. From the point of view of research in socialization, the basic question concerns the acquisition of moral values and moral responses related to these values. Moreover, the relationships between cognitive and behavioral aspects of morality have not yet been examined closely. Under what conditions is moral behavior congruent with moral attitudes and opinions, and under what conditions are there inconsistencies between the cognitive and behavioral aspects of morality? Related to this is the question of generality of moral behavior, and there are two aspects to this question. First, are various kinds of moral behavior closely related, e.g. are generosity and social responsibility positively correlated? Second, are assessments of moral judgment related to broad or limited areas (to many or few "targets") of moral behavior--to either or both? For example, are high scores on tests of moral judgment, such as Kohlberg's, associated with altruism toward one's family or friends; with contributions to public charities; or with both?

A number of available techniques are invaluable in assessing moral attitudes and judgments, e.g., Piaget questions, the Kohlberg test, stories such as those developed by Hoffman. Moral or prosocial behavior is more difficult to study and there is a real need for more

experimental tests of such variables as sympathy, cooperation, consideration of others, moral responsibility, resistance to temptation, honesty, altruism, and equalitarianism. A number of promising techniques have been developed and described in the literature, but more are needed. While it is very difficult to obtain representative or extensive samples of spontaneous prosocial behavior in natural settings, there may be some situations in which adequate observations could be made because subjects could be observed for fairly long periods of time--for example, in summer camps, on playgrounds, in club settings.

While numerous agents of socialization influence moral development, common sense--and some psychological and sociological literature--suggests that parents and peers are the most important. The following paragraphs are essentially an outline of the kinds of variables which must be examined in investigations of the antecedents of moral behavior and attitudes, together with some suggestions about the methods to be employed in these investigations.

1. What are the consequences on children's moral behavior and attitudes of different child-rearing techniques? More specifically, do warm, nurturant, affectional parent-child relationships foster the development of high levels of morality in the child? Does "gentle" child-rearing produce "gentle" attitudes and/or gentle, altruistic, prosocial behavior?

The following aspects of child-rearing practices must be studied: parental disciplinary techniques (including physical punishment, love withdrawal, reasoning, and explanation); warmth and

affection; permissiveness-restrictiveness; parental agreement or disagreement on disciplinary procedures; consistency in disciplinary procedures; democracy in the home; power assertion. Better methods of studying these antecedent variables are required. Antecedent variables of this sort are generally evaluated by means of parental interviews or home visits. The first of these methods has repeatedly been shown to yield unreliable information and the second is limited and expensive, providing samples of behavior of questionable validity and generality. Parent-child relations must be studied by innovative, more fruitful techniques. The use of lifelike structured observations offers a good deal of promise. Investigators must devise ingenious situations in which parents and children can be observed interacting in spontaneous, unrehearsed ways--situations in which parents must resort to their "natural" ways of handling their children and children must react in their usual ways. These might include having the mother "teach" the child to do something, solving a problem with the child, motivating him to do a new task, etc.

2. Under what conditions is the parent a direct model for moral behavior and attitudes? To study this question requires evaluation of the relationship between the child's moral attitudes and behaviors and those of his parents. Do children who are highly identified with their parents (identification must of course be assessed by means of independent criteria) emulate their parents' moral behavior more closely than the children who have only relatively weak identification with their parents? Are parents who are highly committed to their moral values and standards better models for moral behavior than parents who have less strong moral commitments?

3. Does direct tuition (training) by parents affect the child's level of morality? If so, under what conditions? Essentially, this is the question of how effectively parents "communicate" their own values and standards. "Values communication" is a very complex variable and includes such behavior as moralizing and preaching; the use of examples, i.e. parent's own behavior; rewards and punishment for "good" and "bad" behavior; parental interpretations to the child of the effect of his behavior on others; encouragement of moral responsibility and cooperation; helping the child to distinguish between accidental events and premeditated acts; encouragement of independence in moral judgment; emphasis on external punishment or internalized standards; discussions of moral issues and conflicts; emphasis on conventional compliance with "law and order."

4. In what ways are the child's personality characteristics and level of emotional adjustment (obviously related to the familial variables discussed in the questions above) related to moral values and behavior? Are high levels of conscience associated with feelings of general adequacy, emotional security, self-confidence, and positive self-concepts? And is congruence between moral judgments and behavior related to status with respect to emotional adjustments? Are the attitudes and behavior of emotionally stable individuals more likely to be self-consistent?

5. At what ages, and in what ways, do peer influences on moral development become prominent? The question seems particularly relevant for the periods of adolescence and youth, but peer influences may be powerful before these times. The critical questions to be examined are these: Do attitudes and behavior change as a result

of increasing contact with peers? If so, in what directions? Are youngsters who are strongly identified with their parents more resistant to peer influences if their peers have moral values that differ from their parents'? Are these same youngsters more likely to establish firmer moral commitments if their peers reinforce the values that they have already acquired at home? Are good social adjustments and strong attachments to peers associated with radical changes in values? If so, under what social conditions, and with respect to what dimensions of morality?

Another note on method seems appropriate here. Ideally, many of these problems should be investigated longitudinally. The research plan would involve the same group of subjects, intensively studied from early childhood to early adulthood. Data would be collected on their moral attitudes and behavior--as well as on their relations to parents, personality and adjustment, and relations to peers. Unfortunately, this kind of study is probably impossible from the practical point of view. But a more limited longitudinal study might be feasible. Suppose, for example, a group of 12-year-old subjects was intensively studied and then reexamined at two-year intervals until they reached college age. The initial study at age 12 would be the most extensive, focusing on the full range of familial antecedent variables and variables related to personality and adjustment. Assessment of social adjustment and relations to peers would also be made at this time. In subsequent sessions, at two-year intervals, the research could center on moral attitudes and behaviors and on changing interrelationships with peers. If this plan were followed, certain critical familial and personal

antecedents of high and low levels of morality would be investigated only once, while peer influences would be studied over a longer period of time.

V. A New Theoretical Perspective for Research on Human Development[1]

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This is a presumptuous paper. In the space of a few pages, it purports to demonstrate that the scientific model typically employed for research on human development is critically impoverished -- both theoretically and empirically -- and then proceeds to present a new theoretical model alleged to be more adequate to the task.

I contend that the much-prized model of the experimental psychologist, as it is usually applied, is impoverished in at least four major respects:

First, it is ordinarily limited to a two-person system involving, or at least confining attention to one experimenter and one child -- the latter typically -- and significantly -- referred to as a "subject."

The term "subject" is significant because it reflects the second major restriction. The process taking place between experimenter and child is ordinarily conceived of as unidirectional; that is, one is concerned with the effect of the experimenter's behavior on the child, and not the reverse.

Third, this second participant in the system, the experimenter, is usually a stranger, nine times out of ten a graduate student, whose prior relationship to the child is non-existent, or if existent, trivial in character.

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[1]A more extended version of this paper is in preparation.

Fourth, and most important of all, the two-person system exists, or is treated as if it existed, in isolation from any other social context that could impinge on or encompass it.

These four features so common in our experiments are hardly characteristic of the situations in which children actually develop. Thus in the family, the day care center, preschool, play group, or school classroom:

1. There are usually more than two people.
2. The child invariably influences those who influences him.
3. The other participants are not strangers but persons who have enduring and differing relationships with the child.
4. Finally, the behavior of all these persons is profoundly affected by other social systems, in which these same persons participate in significant roles and relationships, vis-a-vis the child and each other.

If all this be true, then much of our research is off the mark. We are using a theoretical model which is <u>ecologically invalid</u>. By ruling out of consideration the very phenomena that we most need to study, the model commits us to a science that is puny and trivial in comparison with the true nature of the phenomena which it purports to study. And we continue to employ this model in the mistaken belief that it constitutes our only hope for scientific legitimacy.

But, as we all know, times are changing, and, at least in child development, illegitimacy is on the rise. As a result, there is some hope of a new theoretical perspective.

What properties must the new research model have if it is to meet the major requirements we have already outlined?

1. Reciprocality. First and foremost, the model must be conceived as a two-way system, in which the behavior of each participant both affects and is affected by the behavior of the others. Thus, in a laboratory experiment, one would have to be concerned not only with changes in the child's response as a function of the behavior of an experimenter but also with the reverse; that is, the effects on the experimenter of the behavior of the child. The same consideration would apply to studies of other socialization systems such as parent and child, teacher and child, the child in the group, etc.

The importance of reciprocality as a defining property of any adequate model for the socialization process has been recognized in theoretical discussions, but in research practice the principle has been more honored in the breach than in the observance.

The property of reciprocality implies two important corollary principles.

a. The child as stimulus. The child is to be viewed not merely as a reactive agent but as an instigator of behavior in others. To use the language of Kurt Lewin, the child has "demand characteristics" which tend to evoke certain patterns of response in others. Thus a young baby's "cuteness," and even more clearly its cry, invite, indeed almost compel a reaction from persons in its immediate environment. An adequate research model must take into account the almost inevitable impact of such demand characteristics on others, including the experimenter.

b. The child as socializing agent. The potency of the child as a stimulus takes on added significance in any situation involving

protracted interaction between the child and another person. For, over a period of time, not only does the adult produce lasting changes in the behavior of the child, but vice versa. In other words, not only does the mother, or other consistent caregiver, train the child, but the child also trains the mother.

2. Role Specification. A second requirement of an ecologically valid model is that the roles of other participants besides the child be specified and systematically examined as independent variables. Two types of roles are usefully distinguished. First, there are the persons who play specific and enduring roles in the child's life, such as mother, father, older brother, teacher, friend, etc. G. H. Mead coined the term "significant other" to designate this special kind of special relationship, and we shall follow his usage. A second type, presumably derived from the first, involves more generalized roles, such as male adult, female adult, older child, younger child, etc.

Significant others. It is a sobering fact, whether from the point of view of science or social policy, that, in terms of direct observation and systematic study, we know more about the impact on the child of an unidentified stranger, who happens to serve as an experimenter, than of the child's own parents, family members, and other close associates.

Generalized roles. The possibility that the young child may be differentially and significantly responsive to persons not only as particular individuals but as possessors of more generalized characteristics such as sex, age, or social background, has also been largely overlooked. Part of the reason derives from a scientific

tradition which defines the experimenter as a neutral nonentity excluded from substantive consideration in the experimental design. Significantly referred to only as E, bereft of age, sex, or social identity, he is treated as if he were an interchangeable part of the research apparatus, like a light bulb. In point of fact, of course, the experimenter is not just anybody, but always someone of a particular age, sex, and social background.

3. Two-Person vs N-Person Systems. Expanding the socialization system to include more than two people of course increases opportunity for both role differentiation and reciprocal response. To take the classical example of a three-person system -- the nuclear family, we have within it the possibility of differential allocation of parental roles between father and mother and, now, instead of only one dyadic relationship, a total of three -- mother with child, father with child, and mother with father.

Another important three-person socialization system is represented by the mother in simultaneous interaction with a first and second child. Inclusion of the father, of course, produces a four-person system. From an ecological point of view, important participants are not limited to parents and children. Conceivably they might also include a grandparent, babysitter, teacher, etc. In terms of research strategy, however, it would probably be wise to assess the role of such ancillary participants first in triadic situations involving mother, child, and third party.

4. Second-Order Effects. Ordinarily, research on socialization is confined to what might be called first order effects -- the direct impact of one person on the behavior of another. But the pattern of

interaction between two people, such as mother and child, can also be profoundly affected by third parties. Thus, both mother and child may act differently toward each other in the presence of the father, younger child, or stranger. This is what is meant by a second-order effect.

What is needed are observational and experimental studies of the changes that occur in patterns of interaction as a function of the presence or participation of the third party -- be it father, mother, grandmother, babysitter -- or, perhaps more important in contemporary society -- the television set.

5. Interaction between Systems. The most powerful second-order effects in socialization, however, are not those exerted by an individual but by other social structures and institutions. For example, this author has argued elsewhere that the key to an understanding of socialization in contemporary American society, and the Western world generally, lies in the phenomenon of segregation by age, and the alienation which such segregation produces. This segregation, in turn, is the unintended consequence of developments in many different segments of society. A host of factors conspire to isolate children from the rest of society. The fragmentation of the extended family, the separation of residential and business areas, the disappearance of neighborhoods, zoning ordinances, occupational mobility, child labor laws, the abolishment of the apprentice system, consolidated schools, television, separate patterns of social life for different age groups, the working mother, the delegation of child care to specialists -- all these manifestations of progress operate to decrease opportunity and incentive for meaningful

contact between children and persons older, or younger, than themselves.

These ecological changes are crucial not only for the understanding and solution of urgent social problems. They are also critical for the further development of adequate theory and research on the socialization process. It is the central thesis of this brief paper that most of the environmental variance in human capacities, motivation, and behavior derives not from first-order socialization effects within family, classroom, or peer group, but from the second-order impact of other institutions in the society such as the world of work, public transportation, or the structure of neighborhoods. Moreover, instead of attempting to study these in the scientifically confounded and, nowadays often socially disintegrated form in which nature, or society, gives them to us, we should endeavor to create new ecological arrangements designed simultaneously both to solve pressing social problems and to test important theoretical hypotheses.

I close with a few examples of possible research designs for such an experimental human ecology.

1. A study currently under way is based on an adaptation of a Soviet pattern in which business organizations "adopt" groups of school children and establish relationships of mutual visiting, help, and interest in each others' work. Such a program has been introduced in a New England community. The parents of the children are not directly involved, but changes are being assessed in the attitudes of parents toward their children and children toward their parents.

2. A related design involves older children in responsibility for the young in the primary grades. They are to escort the younger children to and from school, teach them games, help them with schoolwork, etc. Dependent variables might include changes in the older children's school performance, career plans, reading interests, views on childrearing, and behavior at home as perceived by their parents.

3. An educational program is set up for couples expecting their first child. Both husband and wife must volunteer to be included but only one spouse is selected (on a random basis). After completion of the program and arrival of the child, observations are made of mother-infant interaction. Higher frequency of reciprocal response is predicted for mothers whose husbands attended the program than for the mothers who attended themselves.

4. Two comparable low-cost housing projects are selected which differ in that one of them has shops and services within easy walking distance, the other involves a trip by car or bus. The dependent variable is the amount of time parents spend in interaction with school age children and the consequent effects on the children's performance in school.

Hopefully such investigations would have a beneficial effect simultaneous in two domains. They would contribute to making human beings more human both in research and in reality.

APPENDIX

Outline for PEM Study Adopted for Planning Purposes

(Detailed changes have been made by Task Groups at the discretion of group members.)

1000. PEM Aspects of Child Development

1100. Special Problems in Infancy and Early Childhood (birth to 5 years)

1101. Group care
   1. Effects of orphanage rearing, multiple mothering vs one-to-one mother-child (or surrogate mother) relations
   2. Related effects of environmental complexity

1102. Separation anxiety: fear of the strange

1103. Readiness
   1. General concept
   2. Special application to disadvantaged children

1104. Forced training ("pushing")
   1. In relation to "natural" intellectual limits
   2. In relation to readiness

1105. Sequential organization of learning
   1. In infancy
   2. In early childhood

1106. Parental involvement and influence on early development
   1. Effects of home environment, of implicit theories and practices of parents
   2. Manipulation of parental beliefs and practices, in enrichment programs

1107. Modes of learning and experience that affect early behavioral development
   1. Differential effects on anatomical maturation and behavioral development
   2. Correspondence between rates of anatomical and behavioral development
   3. Effects of environmental (experiential) enrichment and impoverishment, and cumulative effects with increasingly complex circumstances
   4. Hierarchical conceptions of intellectual development (Piaget)
   5. Development of learning sets and their implications for intellectual, motivational, and personality development; resistance of resultant behaviors to extinction
   6. Critical periods

1200. Child Socialization

1201. Conceptualization of the socialization process
   1. Socialization pressures
   2. Learning paradigms: e.g., dependency relations and adult control of "effects" (reinforcement), reference group formation

1202. Internalization of beliefs and values
    1. Conceptualization of attitude, belief, and value systems
    2. Identification processes
    3. Impulse control (self control)
    4. Effects of environmental resources
1203. Cognitive socialization
    1. Psycholinguistic structures, language development: effects on thought, beliefs, attitudes, interests; patterns of expression, values
    2. Uncertainty and information-seeking
    3. Development of expectancies; category accessibility; assimilation; effects on perception, cognition, action
    4. Symbolism, symbolic behavior

1300. Personality Development
1301. Developmental theories (Freud, Erikson, Piaget, Sears)
1302. Developmental sequences, stages
    1. Critical periods
    2. Fluid and crystallized patterns of intelligence (Cattell)
1303. Development of self-identity
    1. Self concept, ego theories, self theories
    2. Relations to social class, racial-ethnic factors, region, sex, family characteristics
1304. Effects of age, sex, culture, and other environmental factors
1305. Development of mechanisms of coping and adaptation

1400. Behavior Change
1401. Personality, learning
1402. Susceptibility to change of personality traits, attitudes, interests, beliefs, values
1403. Measurement of change
1404. Genetic, maturation, and learning factors in physical and psychological growth

2000. Personality

2100. Conceptual and Theoretical Approaches
2101. Criteria for a viable theory
2102. Development of unified, integrated theoretical formulations
    1. Cross-level comparisons and correlations
    2. Developmental histories of stable traits
    3. Relations among trait patterns at various developmental levels
    4. Relations of traits to perceptual responses in person perception and interpersonal interaction

2200. Cognitive Conceptions

2201. Cognitive style, complexity
2202. Balance theories
2203. Cybernetic formulations
    1. Computer simulation of personality
    2. Mathematical models

2300. Developmental Approaches (see 1300)

2400. Dynamic Approaches (see 1303, 4000)

2500. Morphologic Approaches

2600. Physiologic, Psychophysiological, and Biochemical Approaches (see 2102.1)

2700. Trait Structure, Multivariate Approach - Taxonomy of Trait-Explanatory Concepts of Stylistic and Temperament Aspects of Personality
2701. Methodological problems: definition of universes of behaviors for self-report, observation-rating, and objective test studies, cross-media matching of stable structures, design paradigms, including multi-modality designs and trait x treatment designs; construct validation of traits; effects of age, sex, sample, culture, and other environmental effects, and relations of these to resulting trait patterns; the range of roles and sets in relation to diversity of response patterns obtained (social desirability, acquiescence, and other specific sets), their similarities in terms of effects on self-description, and the relations of traits to moderator variables representing such sets
2702. Observational, rating methods: rater and "ratee" sources of effects in peer and "other" ratings, in observational trait assessment, and in interpersonal interaction; explicit concern with task, stimulus presentation, response format, socio-environmental setting, and demographic characteristics of participants; conceptual and empirical relationships among similar and related trait descriptors within observational-rating subdomain and in other subdomains (self-report)
2703. Self-report methods: item pools; format; item vs cluster factorization; measurement of and correction for response bias or distortion; development of a unified, consistent conceptual framework for concepts of personality style and temperament
2704. Objective test, misperceptive, indirect assessment, and development of fresh, new approaches to personality measurement and description

2800. Creativity
2801. Conceptualization of creativity; relations to intelligence, personality factors

2802. Characteristics of the creative person
2803. Analysis of the creative process
2804. Characteristics of the creative product
2805. Characteristics of the creative situation, short- and long-term; situational factors contributing to creative performance
2806. Measurement of creativity

3000. Emotions

3100. State Patterns: Physiological, Cognitive, Behavioral
3101. Arousal stimuli
3102. Response dimensions
3103. Uniqueness
3104. Learned-unlearned dimensions
3105. Affective learning; autonomic and physiological learning

3200. Relations to Traits, Roles

3300. Moderation of Expression by Learning
1. Culture patterns
2. Age, sex, group norms

3400. Drug Effects on Emotional Patterns

3500. Differentiation of States, Reflecting Situational, Organismic, and Stimulus Variations, from Traits, Represented as Long-Term Individual Dispositions

3600. Arousal States: Adrenergic Response, Stress

3700. Dysphoric States: Anxiety, Depression, Guilt, Shame, Remorse (see 4300)

3800. Duphoric States: Happiness, Elation, Joy, Hope, Confidence

4000. Motivation

4100. Conceptualization and Theory (human motivation)
4101. Homeostatic systems, physiological need
4102. Need-press system (Murray), subsystems (n Ach)
4103. Dynamic systems (Freud, Cattell)
4104. Cognitive and cybernetic approaches: motivation inherent in information-processing functions (Hunt), cognitive dissonance theory, incongruity, collative variables (Berlyne), balance theories, exchange theory
4105. Motivation inherent in individual performance, competence motivation (White)
4106. Trait systems and patterns (Guilford, Cattell)
4107. Values systems, moral character
4108. Conceptualization of interest, attitude, need, belief, value, ideal

4200. Process and Trait Formulations
4201. Relations and differences in conception and approach
4202. Process theories and formulations
    1. Balance theories
    2. Exchange theory
4203. Trait formulations: motives, values, character traits
    1. Methodology of measurement: Strong paradigm, Thurstone scales, Likert scales, Cattell's and Campbell's indirect approaches: self-report, objective, misperception, observation, rating, content analysis, unobtrusive measures
    2. Analytic approaches: factor analysis, multidimensional scaling, profile clustering
    3. Factored patterns of sentiments, attitudes, interests, beliefs, values
    4. Variations related to age, sex, sample, culture, and other environmental factors

4300. Frustration, Stress, and Anxiety
4301. Frustration theory and research evidence
4302. Conceptualization of stress
    1. Relation to frustration (Selye)
    2. Utility of stress concept in interpretation of behavior
    3. Relationships among physiological and psychological aspects
    4. Stress and coping, adaptation
4303. Adaptation-Level Theory (Helson) (see 5100)

4400. Conflict
4401. Conceptualization of conflict (Miller, Murphy, Cattell)
    1. Types of conflict: role, value, internal
    2. Approach and avoidance relations
4402. Conflict measurement and calculus
4403. Conflict in relation to interpretation and prediction of action

4500. Interests and Vocational Guidance
4501. Incremental value of interest measurement over ability and aptitude measures in predictions of various criteria on various populations (Thorndike, 10,000 Occupations; Clark, Minnesota study)

5000. Environmental Variables

5100. Conceptualization of Environmental Variables and Their Effects on Behavior; Human Ecology

5200. Methodologies for Encoding Environmental Factors

5300. Taxonomic Systems of Environmental Variables

5400. Normative Studies of Selected Behaviors in Relation to Defined Patterns of Environmental Setting: Sampling Problems in Relation to Populations, Behaviors, Macro- and Micro-Environmental Settings

6000. Interpersonal Behavior Processes

6100. Group Theory, Role Theory, Interpersonal Settings

6200. Interpersonal Perception, Attraction, Influence; Social Acuity, Empathy

7000. Variations in Psychological Processes

7100. Paradigms for such Research, Taking Account of Persons, Tasks, Environmental Settings, and Occasions (Cattell covariation chart, Campbell-Fiske model, longitudinal replication)

7200. Paradigmatic Studies of Selected Learning, Motivation, Perception, and Other Psychological Processes to Investigate Variations Attributable to Shifts in Subject, Task, Setting, and Occasion Dimensions

7201. Analyses to estimate magnitudes of variance components in standard dependent variables accounted for by trait, treatment, and trait by treatment sources and their specific constituents

7202. Analysis of total interaction parameter estimates into principal components or other dimensions in order to compare results by such methods with conventional R, P, Q analysis, both with single dependent variables and vectors (multiple dependent variables)